Study Material

2nd Semester

Problems and Solutions

Chapter: Cost Sheet

Calculation of different percentage after preparing Cost Sheet

1. The Directors of a manufacturing company require a statement showing the production results of a business for the month of April, 2018. The cost accounts give the following information:

MANAGEMENT AND THE CONTROL OF THE CO	
Stock in hand (1.4.2018)	₹
Raw Materials	25,500
Finished goods	17,300
Stock in hand (30.4.2018)	
Raw Materials	26,200
Finished goods	15,000
Purchases of Raw Materials	22,000
Work-in-progress (1.4.2018)	8,200
Work-in-progress (30.4.2018)	9,000
Sale of Finished goods	72,000
Direct wages	17,100
Non-productive wages	
Stores	100
Office Expenses	3,000
Works Expenses	3,000
Selling and Distribution Exps.	4,200

The following information is required: (a) The value of materials consumed, (b) Works Cost, (c) Total cost of production, (d) Cost of goods sold, (e) The profit on goods sold, (f) Percentage of works overhead to productive wages, (g) Percentage of office on cost to works cost, (h) Percentage of selling and distribution expenses to sales.

Solution:

Statement of Cost

	in and	₹
Stock of Raw materials (1.4.18)		25,500
Add: Purchases of Raw Materials		22,000
되었다. 그런 이 문화 없었다면 하나 하다는 이 밤을 하나 되었다. 그렇게 되었다면서 뭐하면 하다.		47,500
Less: Stock of Raw Materials (30.4.18)		26,200
Value of Materials Consumed (a)	4.	21,300
Direct Wages	10.58	17,100
Prime Cost		38,400

Work Overheads:	1	al and the second
Non-Productive wages	800	. A
Stores	100	
Works Exps.	3,000	
		3,900
(등 및 환경) 등 교육 회사 이번 기계	Gross Work Cost	42,300
Add: Work-in-Progress (1.4.18)	3.00	8,200
[19] [10] [10] [10] [10] [10] [10] [10] [10	ini kalimi besa ya jikawazia e	50,500
Less: Work-in-Progress (30.4.18)	strander kray alle and	9,000
	Work Cost (b)	41,500
Office Exps.	in the second of	3,000
A. A.	Cost of Production (Office Cost) (c)	44,500
Add: Stock of Finished goods (1.4.18)		17,300
		61,800
Less: Stock of Finished goods (30.4.18)	in a simple of the straightful comments	15,000
	Cost of Goods Sold (d)	46,800
Selling and Distribution Expenses	cost of Goods Sold (a)	4,200
	Cost of Sales	
TO A PROPERTY (AND A PROPERTY AND A PROPERTY (AND A PROPERTY AND A PROPERTY (AND A PROPERTY AND		51,000
	Profit on Goods Sold (e)	21,000
	Selling Price	72,000

Calculation of Percentages:

(f) Percentage of Works Overhead to Productive Wages

$$\frac{\text{Works Overhead} \times 100}{\text{Productive Wages}} \text{ or } \frac{3,900 \times 100}{17,100} = 22.807\%$$

(g) Percentage of Office on Cost to Works Cost

Office on cost × 100 Works Cost or
$$\frac{3,000 \times 100}{41,500} = 7.228\%$$

(h) Percentage of Selling and Distribution Expenses to Sales

Selling & Dist. Exps. × 100 Sales or
$$\frac{4,200 \times 100}{72,000} = 5.833\%$$

WIP valued at Prime Cost and at Works Cost

2. XYZ is manufacturing refrigerators and the following details are furnished in respect of its factory operations for the year ended 31st March, 2018.

•	Work-in-Progress in the beginning	₹		₹
	At Prime Cost	51,000	0. 95±0	
	Manufacturing Exps.	15,000		66,000
	Work-in-Progress at the end		, was a	
	At Prime Cost	45,000		
	Manufacturing Exps.	9,000		54,000
	Stock of Raw Materials in the beginning	1 461.50		2,25,000
	Purchases of raw materials	il track	inoxina e	4,77,000
	Direct Labour		i ener	1,71,000
	Manufacturing expenses	mer sold	prit Api	84,000
	Closing stock of raw materials		d and	2,04,000
	On the basis of above data, prepare a statement showing the cost of pr	oduction.		
	Solution:		esse de	

Statement Showing Cost of Production of Refrigerators for the year ending 31st March 2018

the second s		₹	₹
Raw Materials: Opening Stock		2,25,000	
Purchases		4,77,000	
make the house of the same of the same of		7,02,000	
Less: Closing Stock of Raw I	Materials	2,04,000	
Cost of Raw Materials Consumed			4,98,000
Direct Labour			1,71,000
			6,69,000
Add: Work-in-progress in the beginning	WIP valued at	10 700	51,000
4020 [기타] [1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Prime Cost		7,20,000
Less: Work-in-progress at the end			45,000
the second property of the second	Prime Cost		6,75,000
Manufacturing exps.		84,000	
Add: Work-in-progress in the beginning	WIP valued at	15,000	of tare reintary.
	Works Cost	99,000	
Less: Work-in-progress at the end		9,000	90,000
THE ENGINEERS OF GREEK TO CONTROL	Cost of Production		7,65,000

Here, Works Cost = Cost of Production

Value of Closing Stock of Finished Goods not given

3. Prepare a Cost Statement and determine profit from the following information:

Consumable Materials	₹
Opening stock	10,000
Purchases	85,000
Closing stock	4,000
Direct Wages	20,000
Other Direct Charges	요하는 사람들은 이 경기를 위하는 사람들이 있다. 그리는 아내리는 유리를 위하는 위에 들었다고 하는데 다른다.
Factory Overheads	10,000
Office Overheads	100% of Direct Labour
	10% of Works Cost
Selling and Distribution expenses	₹2 per unit sold.
어느 그는 그는 그는 사이 그는 그를 가는 것이 그들이 그를 가는 것이 하지만 하게 되는 것이다. 그렇게 되었다면 살아보는 것이다.	

Units of Finished Product
In hand at the beginning of the period
Produced during the period
In hand at the end of the period

1000 (Value ₹16,000) 10,000 2,000

Also find out the selling price per unit on the basis that profit margin is uniformly made to yield a profit of 20 per cent of the selling price. There was no work-in-progress either at the beginning or at the end of the period.

Solution:

Cost Sheet for the Period ended March 31, 2018 (Output 10,000 units)

	Total ₹	Per Unit ₹
Consumable Materials		
Opening Stock 10,00	er e	
Add: Purchases 85,00	0	
95,00	0 1	
Less: Closing Stock 4,00	91,000	9.10
Direct Wages	20,000	2.00
Other Direct Expenses	10,000	1.00
Prime Co.	st 1,21,000	12.10
Factory Overheads: 100% of Direct Wages	20,000	2.00
Works Co	st 1,41,000	14.10
Office Overheads: 10% of Works Cost	14,100	1.41
Cost of Production (10,000 Unit	(s) 1,55,100	15.51
Add: Opening Stock of Finished Goods (1000 units)	16,000	non-eyk
그렇게 하는 사람들이 하고 있다면 얼마를 가지 않는데 되었다.	1,71,100	
Less: Closing Stock of Finished Goods		Valuation of
(2000 units @ ₹15.51 per unit i.e. Cost of Production per unit) 31,02	20 31,020	Closing Stock made
Cost of Goods Sold (9000 unit		by following FIFO
Add: Selling and Distribution Overheads @ ₹2		Method
per unit (₹2 × 9000 units)	18,000	Cost of Production
Cost of Sal	les 1,58,080	No of units produced
Profit (20% of Selling Price i.e. 25% of Cost)	39,520	100 of anics produced
Selling Pri	ice 1,97,600	1,55,100
(Per Unit Selling Price ₹ $\frac{1,97,600}{9,000}$ units i.e. ₹21.96)	of a silver of a second	10.000

4. From the following particulars prepare a statement in such form as you consider most suitable for showing clearly all elements of cost:

powns !	₹	one Marine ₹
Opening stock of raw materials	25,000	Carriage on goods sold 1,500
Purchase of raw materials	70,000	Rent and rates of workshop 2,500
Raw materials returned to suppliers	2,000	Fuel, gas, water etc. 1,000
Closing stock of raw materials	18,800	Repairs to plant 600
Wages paid to :	main had one	Depreciation on machinery 1,400
Productive workers	18,000	Office expenses 1,500
Non-productive workers	2,000	Direct chargeable expenses 800
Salaries paid to office staff	5,000	Advertising 1,200
Carriage on raw materials purchased	500	Abnormal loss of raw materials 1,200
		TALD II D.C.

Solution

Petrod : Year codynes 32.17	Statement of Cost		Period
Materials consumed : Opening stock Purchases Carriage on purchases	नेहरूवाँ (pideografia Vilosciti) केन्द्रकंग tuade उत्तर स्ट	25,000 70,000 500	Alexadels Politicals S
Less : Returns	Treatment of Returns of Raw	95,500 2,000	bavo lastadyi 141-lesi ermedidazail
Less: Abnormal loss (see Note)	Materials and Abnormal Loss of Raw Materials	93,500 1,200	M.
Less: Closing stock Productive wages	In case of Normal Loss of Raw	92,300 18,800	73,500 18,000
Direct chargeable expenses Prime cost	Materials, no treatment is required. They are absorbed by the good units	deddeng o carres	92,300
Works overhead:	produced.	2,000	1.52.9.20 (11) Assistance
Rent and rates of workshop Fuel, gas, water etc. Repairs to plant		2,500 1,000 600	to feed one poud
Depreciation on machinery Works cost	of wages)-	1,400	7,500 99,800
Office overhead : Salaries to office staff Office expenses	rural Expenses (5% of works cost)	5,000 1,500	6,500
Cost of production Selling and distribution overhead:	nice or 25% otocost)		1,06,300
Carriage on goods sold Advertising	ESTS.	1,500 1,200	2,700
Cost of sales			1,09,000

Estimated Cost Sheet

- 5. The following particulars are available for the previous year's production of fans for M/s. Eastern Engineering
 - (i) Total production 1,000 units.
 - (ii) Total cost of raw materials consumed ₹ 12,000.
 - (iii) Total cost of direct labour ₹ 20,000.
 - (iv) Total works overhead expenses ₹ 40,000.
 - (v) Total general overhead expenses ₹ 36,000.
 - (vi) Total selling and distribution overhead expenses ₹ 16,000.
 - (vii) Total sale price for 800 units sold ₹ 1,12,640.

On the basis of the undernoted instructions prepare a detailed price quotation per unit of fan for the current year:

- (a) Cost of raw materials and direct labour are to increase by 10% and 15% respectively over the previous year's level.
- (b) Works overhead, general overhead, as well as selling and distribution overhead are to be charged at the same respective percentages as in the previous year.
- (c) Profit is to be estimated at the same percentage on total cost as is earned in the previous year.

[C.U., B.Com. (Hons.)]

Output : 1,000 units Cost Sheet	for	r the year
	Total	Per unit
	₹	* (** . ₹° :)
Raw materials consumed	12,000	12.00
Direct labour	20,000	20.00
Prime cost	32,000	32.00
Works overhead expenses	40,000	40.00
Works cost	72,000	72.00
General overhead expenses	36,000	36.00
Cost of production	1,08,000	108.00
Less : Closing stock (200 units) @₹108	21,600	/) .
Cost of goods sold (800 units)	86,400	108-00
Selling and distribution overhead expenses (on 800 units)	16,000	20.00
Cost of sales	1,02,400	128-00
Profit (balancing figure)	10,240	12.80
grave a Sales count of the advantage and such as a section of the	1,12,640	140-80
	alis and and	
turiais constaned f 12,000.	ant was to le	a letol
Raw materials : ¹¹⁰ / ₁₀₀ ×₹ 12		
Raw materials : 110/ ₁₀₀ ×₹ 12 000.05 ₹ 12 000.05 ₹ 12 000.05 ₹ 12 000.05 ₹ 10 000.05 ₹ 1	st meath to re	13:
Raw materials : 110/ ₁₀₀ × ₹ 12	st of dieset le Bild of erboa	13·2 23·0
Raw materials: $^{110}/_{100} \times \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	et of dietet la arts evernea meral everhe litteg and ells	13·2 23·0 36·2 46·0
Raw materials: \$\frac{110}{100} \times \equiv 12	et of dietet la arts evernea meral everhe litteg and ells	13·2 23·0 36·2 46·0
Raw materials: $^{110}/_{100} \times \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	e of diese te nice everne neral everhe ling and dis lingue for R	13·2 23·0 36·2 46·0 82·2
Raw materials: \$\frac{110}{100} \times \cdot 12\$ Direct labour: \$\frac{115}{100} \times \cdot 20\$ Prime cost Works overhead (@ 200% of direct labour) (see Note 1) Works cost General overhead (@ 50% of works cost) (see Note 2) \$\frac{1}{2}\$ \$1	er of dience to ancest overthe trage and dis in price for St of the under	13:2 23:0 36:2 46:0 82:0 41:123:0
Raw materials: \$\frac{110}{100} \times \cdot 12\$ Direct labour: \$\frac{115}{100} \times \cdot 20\$ Prime cost Works overhead (@ 200% of direct labour) (see Note 1) Works cost General overhead (@ 50% of works cost) (see Note 2)	er of dience to ancest overthe trage and dis in price for St of the under	13:2 23:0 36:2 46:0 82:0 41:123:0
Raw materials: \$\frac{110}{100} \times \equiv 12\$ Direct labour: \$\frac{115}{100} \times \equiv 20\$ Prime cost Works overhead (@ 200% of direct labour) (see Note 1) Works cost General overhead (@ 50% of works cost) (see Note 2) Cost of production Selling and distribution overhead (@ 18.5% of cost of goods sold) (see Note 3) Total cost	er of dieser la and it overhe lines and dis le price for St le ffie under le verhensel	13:2 23:0 36:2 46:0 82:0 41:123:0
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Raw materials: \$\frac{110}{100} \times \equiv 20\$ Prime cost Works overhead (@ 200% of direct labour) (see Note 1) Works cost General overhead (@ 50% of works cost) (see Note 2) Cost of production Selling and distribution overhead (@ 18.5% of cost of goods sold) (see Note 3) Total cost Profit @ 10% on total cost (see Note 4)	er of dieser ta meral overthe flang and dis of the for Re see evel. " otherd, ger e respective	13: 23: 36: 46: 82: 41: 123: 22: 146: 14:
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Raw materials: \$\frac{110}{100} \times \equiv 12\$ Direct labour: \$\frac{115}{100} \times \equiv 20\$ Prime cost Works overhead (@ 200% of direct labour) (see Note 1) Works cost General overhead (@ 50% of works cost) (see Note 2) Cost of production Selling and distribution overhead (@ 18.5% of cost of goods sold) (see Note 3) Total cost Profit @ 10% on total cost (see Note 4) Price to be quoted	er of dieser ta meral overthe flang and dis of the for Re see evel. " otherd, ger e respective	13: 23: 36: 46: 82: 41: 123: 22: 146: 14:
Raw materials: \$\frac{110}{100} \times \frac{7}{20}\$ Direct labour: \$\frac{115}{100} \times \frac{7}{20}\$ Prime cost Works overhead (@ 200% of direct labour) (see Note 1) Works cost General overhead (@ 50% of works cost) (see Note 2) Cost of production Selling and distribution overhead (@ 18.5% of cost of goods sold) (see Note 3) Total cost Profit @ 10% on total cost (see Note 4) Price to be quoted Working Notes: (1) Percentage of works overhead on direct labours \$\frac{7}{40,000}\$ \times 100 = 2000/	er of dieser ta meral overthe flang and dis of the for Re see evel. " otherd, ger e respective	13· 23· 36· 46· 82· 41· 123· 22· 146· 14·

Working notes are important for the solution. Be careful about increase/decrease of cost in calculation of quoted price.

(4) Percentage of profit on cost = $\frac{₹ 10,240}{₹ 1,02,400} × 100 = 10\%$.

Estimated Cost Sheet, when a P/L A/C is given and no. of units to be produced also varies

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P. Ltd. a manufacturer of fans, manufactured and sold 2,000 fans during the year ended 31.3.17. Following is the profit and loss account of the company during the year.

Profit and Loss Accoun	t for the year ended 31.3.17
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ACCO to be in the display in	₹		araon 0000an store ₹
To Opening stock of raw materials	20,000	By Sales	6,00,000
" Purchases of raw materials	1,30,000	" Closing stock of raw material	
" Wages	1,80,000		20,000
" Manufacturing expenses	75,000		, alama V
" Gross profit c/d	2,25,000		
	6,30,000		6,30,000
To Rent, rates and taxes	20,000	By Gross profit b/d	2,25,000
" Administration expenses	1,00,000	The second of th	
" Selling and distribution expenses	45,000		3,000 and 3,000
" Preliminary expenses written off	8,000		Atomor jo Sumper
" Donation	5,000		Deficitive work (con
" Net profit c/d	50,000	obiativingoli, bies commet	mean adinger fosti.
07 	2,28,000		2 20 000
- 62-35 L	of contract of the contract of	A second	2,28,000

The estimates made by the company for the year ending 31.3.18 are as under:

- (a) The production and sales of fans will increase by 50%.
- (b) The price of material per fan would increase by 20%.
- (c) The labour cost per fan would go up by 10%.
- (d) Of the manufacturing expenses ₹ 15,000 are fixed and the balance are variable. The variable portion will be in the same proportion of material consumed and wages as in the previous year.
- (e) Administration expenses are to be charged at the same respective percentage as in the previous year.
- (f) Selling and distribution expenses per fan would remain unchanged.
- (g) Selling price per fan will decrease by 10%.

Prepare Cost Sheet for 2016-17 and 2017-18 showing cost, profit and selling price per fan and the total cost, total profit and total sales.

Material Consumed + Wages= **Prime Cost**

Pasmer State and transported to state to be

Working Notes:

- ₹ 60,000 (1) Percentage of variable manufacturing expenses to prime cost: ₹ 3.00.000
- $\frac{\text{₹ 1,00,000}}{\text{₹ 1,00,000}} \times 100 = 26^2/_3\%.$ (2) Percentage of administration expenses to works cost: ₹ 3,75,000
- (3) Raw material cost per fan in 2017-18: ₹ 60 + 20% thereof = ₹ 72.
- (4) Labour cost per fan in 2017-18 : ₹ 90 + 10% thereof = ₹ 99.
- (5) Selling price per fan in 2017-18 : ₹300 – 10% thereof = ₹270.
- (6) Dividend received is a non-operating income. Preliminary expenses and donation are non-cost items. These items have, therefore, been excluded from the cost sheet.

Example of items not to be considered at Cost Sheet:

Int. paid on bank loan, Int. on debentures, Loss on sale of fixed assets, Income Tax paid, Goodwill written off, Patent written off, Preliminary Exp written off, Transfer to reserve, Donation, Discount received, Dividend received, Profit on sale of fixed assets, Bad debt recovered, Interest received.

solution

Output : 2,000 Fans	The Section of the se	t saidtochi.	Total	Per unit
	O - 110 standard - CNO		a des t e toda	₹
Raw materials consumed :	der Seminado and Offi	· 为一、一、国际共	Server on a	14. 高 图 图 文
Opening stock	ins a riog o yasiladiseC arw	20,000	i ceituvi a	LAST DE SPA
Purchases during the year	posta lace	1,30,000	k, stored and s	infravari ^{§, d}
the distribution of the state of		1,50,000	1 00 000	60.00
Less: Closing stock		30,000	1,20,000 1,80,000	90.00
Wages	ollofulis cost data is optim	teall Lonion	3,00,000	150.00
Prime cost Manufacturing expenses:			3,00,000	kirin 190
Fixed		15,000		
goVariable sheshavo nodusinsin	1,88,600 Sedime and c	60,000	75,000	1911 37·50
Works cost			3,75,000	187.50
Office and administration expenses:	A TH \$00: Laterly over			in the
Rent, rates and taxes Administration expenses	teos solicav teos emina dil	20,000	1 20 000	60.00
		1,00,000	1,20,000	247.50
Cost of production Selling and distribution expenses	13 hans be realizable to the	nedents mis another	4,95,000 45,000	247.50
Cost of calds	us i 1 500 (10 toumbri i 300 da 1880 What I 500 00 What al	direct labour a	5 40,000	
of the Cost of sales sing sail od niago	vill cost 7 1,50000 What si	r wodel bout	5,40,000	270·00 30·00
Profit (balancing figure)	ds inflW 000.03.1 7 isos libe nuesa estas no tiloro la ot	direct labour a	5,40,000	270.00
Profit (balancing figure)	ds inflW 000.03.1 7 isos libe nuesa estas no tiloro la ot	direct labour a	5,40,000 60,000 6,00,000	270·00 30·00
Profit (balancing figure)	ds tentW 000.03,1 7 teop like nased sales ago triong-locat principle secures various triff and secures and contracted to	direct labour a	5,40,000 60,000 6,00,000	270·00 30·00 300·00 ended 31.3.18 Per unit
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans	Estimated Cost Sheet	direct labour a	5,40,000 60,000 6,00,000 Period : Year Total	270·00 30·00 300·00 ended 31.3.18
Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials	ds tentW 000.03,1 7 teop like nased sales ago triong-locat principle secures various triff and secures and contracted to	direct labour a	5,40,000 60,000 6,00,000 Period: Year Total ₹	270·00 30·00 300·00 ended 31.3.18 Per unit
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost	Estimated Cost Sheet	direct labour a	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000	270.00 30.00 300.00 ended 31.3.18 Per unit 72.00 99.00 171.00
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses:	Estimated Cost Sheet	of the same rate to the	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000	270·00 30·00 300·00 ended 31.3.18 Per unit ₹ 72·00 99·00 171·00
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed	Estimated Cost Sheet	r under besite on center one of \$ 200 yet ou on person your	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000	270·00 30·00 300·00 ended 31.3.18 Per unit 72·00 99·00 171·00
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000	Estimated Cost Sheet	of the same rate to the	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000	270·00 30·00 300·00 ended 31.3.18 Per unit ₹ 72·00 99·00 171·00
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000 Works cost	Estimated Cost Sheet	r under besite on center one of \$ 200 yet ou on person your	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000	270·00 30·00 300·00 ended 31.3.18 Per unit 72·00 99·00 171·00
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000 Works cost Office and administration expenses:	Estimated Cost Sheet	15,000 1,02,600	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000	270·00 30·00 300·00 ended 31.3.18 Per unit ₹ 72·00 99·00 171·00
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000 Works cost Office and administration expenses: Rent, rates and taxes	Estimated Cost Sheet	r under besite on center one of \$ 200 yet ou on person your	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000 1,17,600 6,30,600	270·00 30·00 300·00 ended 31.3.18 Per unit ₹ 72·00 99·00 171·00 39·20 210·20
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000 Works cost Office and administration expenses: Rent, rates and taxes Administration expenses: 26²/₃% of traduction	Estimated Cost Sheet	15,000 1,02,600	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000 1,17,600 6,30,600	270·00 30·00 300·00 ended 31.3.18 Per unit 72·00 99·00 171·00
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000 Works cost Office and administration expenses: Rent, rates and taxes Administration expenses: 26²/₃% of the control of	Estimated Cost Sheet	15,000 1,02,600	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000 1,17,600 6,30,600 1,88,160	270·00 30·00 300·00 ended 31.3.18 Per unit ₹ 72·00 99·00 171·00 39·20 210·20
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000 Works cost Office and administration expenses: Rent, rates and taxes Administration expenses: 26²/₃% of Cost of production Selling and distribution expenses Cost of cales	Estimated Cost Sheet	15,000 1,02,600 20,000 1,68,160	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000 1,17,600 6,30,600 1,88,160 8,18,760 67,500 8,86,260	270·00 30·00 300·00 ended 31.3.18 Per unit ₹ 72·00 99·00 171·00 39·20 210·20 62·72 272·92 22·50 295·42
Cost of sales Profit (balancing figure) Sales Budgeted Output and Sales: 3,000 Fans Raw materials Wages Prime cost Manufacturing expenses: Fixed Variable: 20% of ₹ 5,13,000 Works cost Office and administration expenses: Rent, rates and taxes Administration expenses: 26²/₃% of the cost of production Selling and distribution expenses	Estimated Cost Sheet	15,000 1,02,600 20,000 1,68,160	5,40,000 60,000 6,00,000 Period: Year Total ₹ 2,16,000 2,97,000 5,13,000 1,17,600 6,30,600 1,88,160 8,18,760 67,500	270·00 30·00 300·00 ended 31.3.18 Per unit ₹ 72·00 99·00 171·00 39·20 210·20 62·72 272·92 22·50

Ascertainment of selling price to maintain desired amount of profit

7. The cost structure of an article, the selling price of which is Rs. 8,000 is:

Direct Materials 50% of total cost
Direct Labour 30% of total cost

Overhead Balance Balance

Profit 20% on selling price

If the material price and labour rates increase by 20% and 10% respective

- (a) If the material price and labour rates increase by 20% and 10%, respectively, and overhead remains fixed, what will be the profit percentage on the same selling price?
- (b) In the above case, what should be the selling price if the profit thereon shall remain at 20% on selling price?

Solution:

Comparative Statement of Cost, Profit and Selling Price

		Anticipated Condition		
Particulars	Present condition Rs.	Selling Price Constant Rs.	Selling Price Changed Rs.	
Direct Materials	$6,400 \times \frac{50}{100} = 3,200$	3,200 + 20% = 3,840	3,840	
Direct Labour	$6,400 \times \frac{30}{100} = 1,920$	1,920 + 10% = 2,112	2,112	
Overhead	$6,400 \times \frac{20}{100} = 1,280$	1,280 + Nil = 1,280	1,280	
Total cost Profit	6,400 1,600	7,232 768	7,232 1,808	
Selling Price	8,000	8,000	9,040	
Percentage of Profit on Sale	20%	9.6%	20%	

Note: Cost = Sales - Profit = Rs. (8000 - 1,600) = Rs. 6,400.

Use of equation

8. A company manufactures radios which are sold at Rs. 1,600per unit. The total cost is

composed of 30% for direct materials, 40% for direct wages ad 30% for overheads. An increase in material price by 30% and in wage rates by 10% is expected in the next year, as a result of which the profit at current selling price may decrease by 40% of the present profit per unit.

You are required to prepare a statement showing current and future profit at present selling price.

How much should selling price be increased to maintain the present rate of profit?

Solution:

Let x be the total cost and y be the profit.

Since Cost + Profit = Sales,
$$x + y = Rs. 1,600$$
(1)

Statement of Present and Future Cost of Radio

Cost elements	Present cost	Increase in cost	Future expected cost	
Cost elements	Rs.	Rs.	Rs.	
Direct Materials	0.30x	0.09x	0.39x	
Direct Labour	0.40x	0.04x	0.44x	
Overheads	0.30x		0.30x	
Overneaus	X	0.13x	1.1 3x	

The increase in cost is 0.13x and decrease in profit is 40%, selling price remaining unchanged. The increase in cost and reduction in profit can be represented by the following equation:

$$1.13x + 0.60y = 1,600 \dots (2)$$

Multiplying equation (1) by 0.60 and subtracting it from equation (2), we get

$$0.60x + 0.60y = 960$$

$$1.13x + 0.60y = 1,600$$

$$(-) 0.53x = (-) 640$$

or,
$$x = Rs. 1,207.50$$
 or $Cost = Rs. 1,207.55$

Substituting the value of x in equation (1), we get

$$1,207.55 + y = 1,600 \text{ or Profit} = \text{Rs. } 392.45$$

-Current Profit =
$$\frac{392.45}{1,207.55} \times 100 = 32.5\%$$
 of cost

Future Profit = 0.60×392.45 = Rs. 235.47

Statement of revised Selling Price to maintain the current rate of profit

		Rs.
Direct Material	Rs. (0.39 × 1207.55)	470.94
Direct Labour	Rs. (0.44 × 1207.55)	531.32
Overheads	Rs. (0.30 × 1207.55)	362.27
Total Cost		1,364.53
Profit (0.325 × 1364.53)		443.47
Revised Selling Price		1,808.00

Thus, the selling price should be increased by Rs. 208 i.e., from Rs. 1,600 to Rs. 1,808 to maintain the present rate of profit.